1960

History U.S. Naval Postgraduate School 1909-195

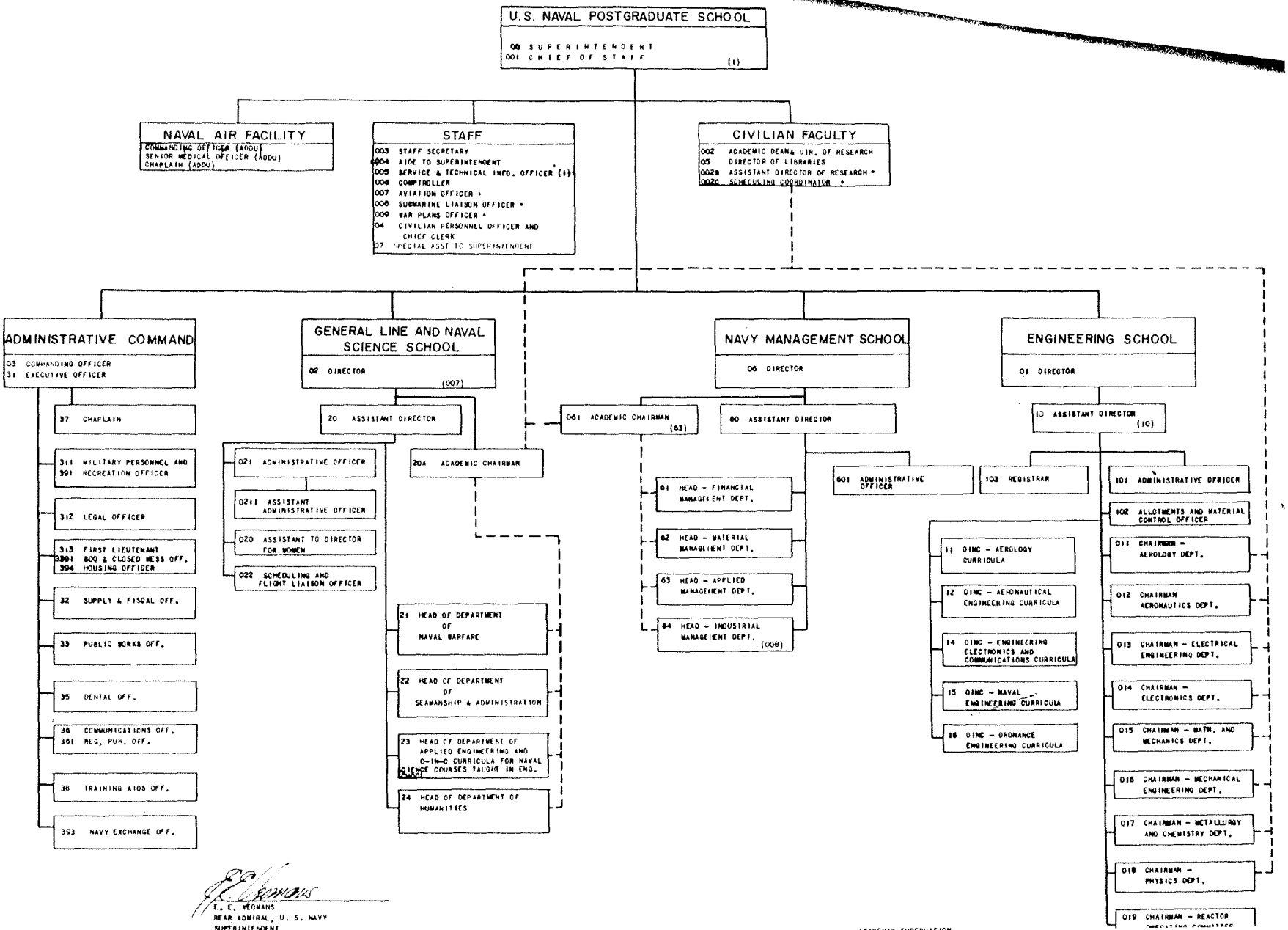
HISTORY

U.S. NAVAL

POSTGRADUATE SCHOOL

1909 - 1958

circa 1960



E. E. YEOMANS
REAR ADMIRAL, U. S. NAVY
SUPERINTENDENT

MISSION

"To conduct and direct the instruction of commissioned officers by advanced education, to broaden the professional knowledge of general line officers, and to provide such other indoctrination, technical and professional instruction as may be prescribed to meet the needs of the Naval Service."

TASKS

Tasks to be accomplished in support of the above mission are as follows:

To provide the advanced education necessary for selected groups of officers to develop proficiency in design, inspection and installation of material, with attendant research problems, and to provide practical and theoretical training necessary for unrestricted line officers to serve in the Naval Service by:

(a) Planning, conducting and maintaining suitable postgraduate courses at the U. S. Naval Postgraduate School, Monterey, California and other civilian colleges;

(b) Planning and directing advanced professional education through the medium of the General Line and Naval Science School;

(c) Planning and directing graduate management education through the medium of the Management School.

(d) Exercise general supervision over the Naval Intelligence School, Washington, D. C.

HISTORY OF U. S. NAVAL POSTGRADUATE SCHOOL

Prior to 1909

General Order #27 of 9 June 1909 was the first formal recognition of the vital need for advanced training in technical specialties of officers of the U. S. Nav Up until this time, in principle, Naval Academy graduates received no postgraduate instruction. Their advanced education was a personal matter, gained from experie and such unsupervised professional study as they elected to pursue. However, as early as 1881, permission was obtained by two cadet engineers to undertake a cour in Naval Architecture at the Royal Naval College, Greenwich, England. In the ensu years two or more graduates each year followed a similar program at Greenwich, Glasgow or Paris. Although there was no very definite policy established along the lines the Navy Regulations of 1893 did state that "naval cadets who show a peculiar aptitude for the profession of Naval Construction may be selected by the Secretary of the Navy for such a scientific mechanical education as will fit them for said profession."

The "Personnel Bill" of 1899 and the report in 1900 by Rear Admiral George W. Melville, the Navy's Engineer in Chief at that time, both recognized the need fc planned advanced technical education. In 1900 the first steps were taken to provide that education within the Navy's own facilities when a postgraduate course for pros- pective naval constructors was started at the Naval Academy under Naval Construc Spear and Hobson. This course was soon transferred to the Massachusetts Institut Technology. A class of instruction in engineering was organized in the Bureau of Engineering in 1904. Rear Admiral Charles W. Rae, the incumbent Engineer in Cl in 1907 reported at that time the favorable results of the class initiated in 1904 and reemphasized the need for such specialist training. The boosters for advanced education must have experienced a sense of genuine accomplishment when General Order #27 was published.

1909 - 1917

This 1909 order transferred control and supervision of postgraduate instruct to the Superintendent of the U. S. Naval Academy. Two rooms in the loft of Isherw Hall, which housed the Naval Academy's Engineering Department, became head- quarters for the new School of Marine Engineering which had a designated head whc was responsible to the Superintendent of the Academy. Ten students were ordered to the first class of the new school. Their course was planned to include: Design Marine Machinery, Shop Practice and Management at private concerns, and Exper mental Engineering and Testing.

Three years later, in General Order #233, October 31, 1912, the Secretary of the Navy directed that certain changes be made. The School of Marine Engineeri became the Postgraduate Department of the Naval Academy. The Head of the Post-graduate Department was given the same general status as the Heads of the Academ academic departments but he was not a member of the Academic Board. The cours were broadened to include those in the areas of Ordnance and Gunnery, Marine Eng neering, Electrical Engineering, Radio Telegraphy, Naval Construction, and Civil Engineering. Headquarters remained in Isherwood Hall. All students were started on their postgraduate curricula within the facilities of the Naval Academy. Their final schooling in the areas of their specialties was provided in civilian universities Students in Mechanical Engineering spent one year (three terms) at the Naval Acade and one year at Columbia University, with practical work at the navy yards. Stude in Electrical Engineering also spent one year at the Naval Academy and one year at Columbia University. Their practical work took them to the navy yards, to the General Electric Company, to Sperry Company, and American Telephone and Teleg Company. Ordnance students spent one term at the Naval Academy and rounded ou their education at Bethlehem and Midvale, Schenectady, Rochester, at the proving grounds, Washington Navy Yard, Bureau of Ordnance, and various other points for special subjects. Naval Construction students spent two terms at the Naval Acaden followed by three years at the Massachusetts Institute of Technology. Students in Civil Engineering spent two terms at the Naval Academy, and two years at Renssel Polytechnic Institute.

In 1915, the Secretary of the Navy requested the President of the Society for Promotion of Engineering Education to appoint a committee to make recommendati concerning the Postgraduate Department. This committee visited the Department i January 1916, and based their recommendations on situation as observed and the N requirements at that time. These requirements revealed 230 positions afloat whic demanded postgraduate education in Marine and Electrical Engineering. At that tir there were 62 graduates of the Department, approximately 40 of whom would be av able at any one time to fill these positions. Training lines of the period provided f an annual input of 15 Marine Engineers, 5 Electrical Engineers and a token number Ordnance officers, Naval Construction specialists and Civil Engineers.

The first two paragraphs of the report of this committee are quoted because their timeliness , in principle, through the years. "The first subject which impre itself forcibly upon the committee after a study of the situation, is the pressing nee an enlargement of the scope of this School. A modern ship of war is a great mecha laboratory. Its construction, and its operation as well, demand a thorough trainin scientific and engineering principles. Even our present Navy requires, in the opin of the Committee, that the number of men trained in the School should be largely in creased, and with the demand for a still larger Navy and an adequate state of pre-paration on the part of the United States to meet any foe, the necessity for an enlar ment of the School is still more evident.

"In the opinion of the Committee, the School should be enlarged so as to be capable of turning out not less than 75 men annually, with provision for a still greater increase in the future. Eventually, it is probable that at least one-fourth of the students in each graduating class from the undergraduate department of the Naval Academy, will require postgraduate training. The number of midshipmen in the present fourth class is 267, so that if the above proportion is correct, there is immediate need of provision for taking care of nearly 70 men each year in the Postgraduate School."

Recommendations following this introduction therefore included: (1) immediate increase of entering classes to 50 in addition to those students assigned to Naval Construction and Ordnance; (2) construction of a new, adequate building. The committee remarked upon the work overload of the instructional staff and stressed importance of time and opportunity for research. They recommended an additional instructor in an existing course, an additional course with the resultant requirement for another professor and instructor. These additions to the staff of three professors and two instructors would provide a total of four professors and four instructors. They approved the continuation of the use of civilian institutions for the final phases of the postgraduate education. They also approved the heavier than normal schedule carried by the students on the basis of their greater maturity and the importance of maximum coverage in a limited period. One additional recommendation covered a common one-year course for Ordnance and Naval Construction students with the Marine and Electrical Engineering studer

Courses covered at the Naval Academy under the Postgraduate Department 1916-17 included Mathematics, Mechanics, Thermodynamics, Chemistry, Electri Strength of Materials, Machine Design, Electrical Laboratory, Testing Materials Laboratory and Engineering Laboratory. In February 1917, a course in Expositi two lecture hours per week, was introduced for the purpose of inculcating "clear, concise and simple methods of expression with particular reference to technical reports".

Civilian educational institutions used during this period were Columbia University, Massachusetts Institute of Technology, and Rensselaer Polytechnic Inst

In March 1917 activities of the Postgraduate Department were suspended be of the need for these officers in the operating forces during World War I.

1919 - 1942

In 1919, operation of the School was resumed in new quarters in the forme Marine Barracks. Students in the MERA (Mechanical, Electrical, Radio, Aeron tical Engineering) areas reported in June; students in Naval Construction in Sept

and Ordnance students the following April. A September 1921 report [1] shows the following distribution of students: 27 MERA reported in June 1920 (1 resignation, 3 EDO assigned to sea June 1921, 3 receiving Radio instruction at Harvard, 4 Aeronautical Engineering at MIT, 3 Internal Combustion Engine Design, 3 Turbine Design, 2 Electric Machine Design, and 4 Electric Shop Propulsion at Columbia); 22 Naval Construction students reporting in September 1920 would be continuing this course at MIT; the 34 MERA students, who had reported to the Naval Academy in June 1921, included one officer from the Coast Guard, one from the Chilean and one from the Argentine Navy. Eight of the 34 were to take subsequent work in Aeronautical Engineering at MIT. The others would be distributed between Columbia and Harvard. The 12 Ordnance students, who had reported in January 19 were specializing as follows: 2 in Torpedoes, 2 in Ordnance Design at MIT, 2 in Fire Control Apparatus at Columbia, 3 in Ballistics at the University of Chicago, in Explosives at University of Michigan. Eight students were pursuing graduate w in law at George Washington University. This course had become a regular post-graduate course within the purview of the Postgraduate School. The report furthe indicates that a total of 142 students would be under instruction as of January 1922. On this September 1941 date, the staff of the School included the Head plus 3 other naval officers, and 9 civilians (3 professors, 4 associate professors, 1 assistant professor, and 1 instructor), an increase of 2 civilians in a two-year period. A course in Logic had been substituted for English. The course in Technical Composition, initially introduced in 1917 before the school activities were suspended, now followed the course in Logic. These two courses were taught by a professor loaned by the English Department of the Naval Academy.

The directive for selection of postgraduate students in engineering, dated January 1922 for the class commencing July 1922, announced that approximately 50 officers would be selected including 20 for Mechanical Engineering, 15 for Electrical Engineering, 10 for Radio Engineering, 5 for Aeronautical Engineering. In June 1922 the Bureau of Navigation Circular Letter No. 21-22 announced that thereafter two classes per year would be ordered to the Postgraduate School. The June class would usually be composed of Engineering students; the September clas would be divided among Ordnance, Engineering and Naval Construction. Each cla would be limited to a maximum of 60 officers, the total number and their distribut among the several specialties depending upon the needs of the service. Candidate for these classes were required to have five or more years of sea service in orde to be considered by the board. Diesel Engineering was introduced in 1924, and Aerology in 1926 with an initial input of 8 officers. This course in Aerology necessitated the introduction of German into the groundwork course at Annapolis. Arrangements for the German language instruction were made on a part time basi with St. John's Academy. Beginning in July 1925, input of student officers into al curricula was made at the same time, namely July. This single input had many administrative advantages.

[1] Report from Head of Postgraduate School to Postgraduate Council dated 22 September 1921

The changes which took place through these years, in the numbers of students assigned to postgraduate education and the areas in which they were trained, were a clear indication of the attempt to keep abreast of the technological changes in the "tools of the trade". They were probably the result also of the recommendations made by a board appointed in 1919 by the Bureau of Navigation to make a study of the instruction and training of Line officers. A footnote on the first page of this report states: "This report is published by permission of the Navy Department for the information of the service. The report of the board has been approved, but the shortage of officers will not permit the recommendations to be carried into effect at the present."

This Board considered the entire career of the naval officer. It was apparen that education was a necessity because of the multiplicity of subjects in which the naval officer was required to have a working knowledge. It was further clear that it would be both impractical and impossible to give all of the instruction which an officer would need throughout his naval life in the first, or Naval Academy, phase. They recommended four periods of instruction. The four periods included the Nav Academy, the General Line Course, the Junior War College, and the Senior War College. Of particular importance in connection with the Postgraduate School was the second period or phase, whose function they defined as "the unification and con firmation of previous instruction and experience of officers, and their progressive instruction in readiness for duties of the next higher order." It was envisioned by the Board that all officers of the Line would be Naval Academy graduates. All officers of the same class would be ordered to take the General Line Course at the end of approximately five years at sea. The curriculum of the course should bring the technical knowledge of the officers up to date in all branches and advance their knowledge of their profession particularly in matters of operation. During the line course the officers were to be watched carefully to determine in which branch each officer should specialize. A proposed General Line Course was included in the report of the Board with the recommendation that the course begin in October 1919 with the assignment of approximately 20 officers from the Naval Academy classes of 1912, 1913 and 1914. The recommendation continued that "the number of students should increase rapidly from year to year until conditions and facilities are such that a whole Naval Academy class may return for the course."

Needless to say, whatever the merits of the recommendations of the Knox-King-Pye report, they have never come to fruition as planned. The events of the passing years have necessitated many adjustments. However, the report was the foundation for our present postgraduate system. The General Line Course becam a reality in 1927 with an original enrollment of 15 U. S. Naval officers and 4 offic of the Cuban Navy. By 1934 this number had increased to 134.

A Bureau of Navigation letter in 1931 expressed the policy with regard to the postgraduate education of a naval officer as follows:

"The plan for officer education contemplates that eventually all line officers shall take the General Line Course at the Postgraduate School when ordered to their first tour of shore duty, and

"From the officers who complete the one year General Line Course there will be selected a limited number of officers for a year's postgraduate training at the Postgraduate School in a prescribed specialty with the idea of developing them as operating specialists. Either from this group or from the original group there will be chosen a small number of design and production specialists in each branch who will have in addition to the second year of postgraduate work a third year of instruction at a civilian university." Through the years to World War II this plan was carried out to the maximum extent possible. New special fields were added to those already in existence as their need became apparent. In 1930 an operating communications course was introduced; in 1931, the separate courses in Mechanical, Electrical, and Diesel Engineering were combined into a single Marine Engineering Course. In 1932, instruction at the Postgraduate School for Naval Constructors and Civil Engineers was terminated and officers in these specialties received their entire training at MIT and RPI. In 1933, the course in Marine Engineering (Operating) was established.

The year 1935 shows 144 officers taking the General Line curriculum. These students were divided into groups, and their curriculum was slightly modified according to the technical field in which they would specialize. Numbers were as follows: 4 Aerology; 23 Marine Engineering (Design); 26 Marine Engineering (Operating); 10 Radio Engineering; 24 Communications; 25 Ordnance Engineering; 12 Aeronautical Engineering; the remaining officers took the unmodified General Line curriculum. During this same year, 1935, 104 officers were in their second year postgraduate work at Annapolis, studying a prescribed specialty, and 48 were taking a third year away from Annapolis, at various naval manufacturing plants and civilian universities. In addition to the above numbers were: 33 studying Naval Construction at MIT; 4 Civil Engineering at RPI; 15 Law at George Washington; and 35 in a course in finance and supply matters which had been instituted in 1934 at the Philadelphia Navy Yard.

At the time the original class of 10 students entered upon their postgraduate training in 1909 the question of location of the school was relatively unimportant because this small number could be absorbed. As the brigade of midshipmen was expanded and the postgraduate school enrollees increased, space did become a problem. The original capacity of the quarters in Isherwood Hall was approximately 30. When the School was resumed in 1919 in the former Marine Barracks the capacity was increased to 150. Subsequently

the capacity was increased to approximately 250 in 1931 by making feasible alterations to the building.

Lack of space and other factors had prompted discussion and consideration of change of location for the Postgraduate School as far back as the early '20s. Admiral H. B. Wilson, Superintendent of the Naval Academy 1921-24, strongly advocated removal of the School from the limits of Annapolis; however, the majority report in 1924 of a board of officers, appointed by the Secretary of the Navy to study this matter of location, stated that Annapolis was "the best site for the Postgraduate School" and recommended its retention there. The problem was restudied in 1931 and, once again, the majority report of the Board of Visitors was against relocation. House Joint Resolution 245, based on the findings against relocation by these two Boards, concluded: "Therefore be it resolved that it is the sense of Congress that the Postgraduate School should be kept at Annapolis, and the Secretary of the Navy is hereby directed to retain the Postgraduate School at Annapolis." There were extensive hearings on this resolution and Rear Admiral F. B. Upham, then Chief of the Bureau of Navigation, took his stand for relocation In stating his views he quoted a portion of the minority report of 1924 in which Mr. J. T. Williams, noted journalist of the time, said: "The desirability of the transfe: of the present Postgraduate School from Annapolis at the earliest possible moment is respectfully urged for the following reasons:

"Annapolis is too small a community to accommodate the undergraduates whc constitute the midshipmen regiment and the postgraduates attending the Postgradua School. Annapolis is associated in the public mind with the midshipmen. The responsibility of their morals and discipline is shared by the citizens of Annapolis. To shoulder their fair share of this responsibility is the duty of the community in whose homes the midshipmen are frequent visitors, at whose churches some of them worship, of whose stores many of them are customers, to whose places of amusement many of them go for recreation.

"Wholly different is the relationship of Annapolis to the Postgraduate School. The latter is attended by naval officers of considerable experience in the world of affairs. Their characters have already been formed. Their postgraduate work has for its paramount, if not its exclusive purpose, the training of their minds. The Naval Academy is a school of character; the Postgraduate School ought to be a naval university.

"So long as the Postgraduate School remains at Annapolis, it will continue to compete with the Naval Academy for the goodwill and favor of the Annapolis community. The morals and discipline of the Academy will continue to be a target for the criticism of the students of the Postgraduate School; this criticism will be echoed by many Annapolitans.

"Again, the midshipmen are, as one of them said, "looking toward the sea"; many of the students at the Postgraduate School are "looking toward the land".

"The best preparatory schools in the country are not to be found outside the gates of our great universities for good and sufficient reasons. The same reasons argue against making the Naval Academy a tail to the Postgraduate School's kite or vice versa.

"The graduate schools of the Army are not located at Highland Falls for good and sufficient reasons. Why, in order to be different from the Army, should the Navy place its postgraduate university outside the gate of the training school of character which the Naval Academy provides for the midshipmen?".

The differences in mission were only a part of the picture. Lack of adequate space, as numbers assigned to the School increased, and the attendant problems of housing, high rents, etc. for the individual students were emphasized in the hearir But costs which would be involved in the move, and political interests and pressur once again defeated the proposal. The time was to come, however, when change o location of the School would become an absolute necessity, when the question would be not whether they should move it, but where they should put it.

Through the rest of the '30s the School continued to function, trying to live within the limits of a budget which showed certain curtailment probably caused by the general depression. Decommissioning of numbers of ships made it possible to assign larger numbers of officers to the General Line Course. Upon the declarati of the emergency prior to our entry into World War II the General Line Course wa discontinued because of the need for these officers to man a fleet which was then expanding rapidly. Furthermore, the space at the School was required for the tra ing of larger numbers of officers in technical areas. Thus the School continued to grow despite the discontinuation of the General Line portion.

1942 - 1951

In 1942, it became necessary to add an annex to the Postgraduate School building for laboratory and classroom space, chiefly because of the great increase in activity in the electronics field. A 418-seat auditorium was added; galleries we enclosed to make their space usable; basement space was converted for laboratori but adequate room for the expanded school was still a problem. In one year, 1941 to 1942, the total number of postgraduate students about doubled, and these new, larger numbers remained relatively constant through the World War II years. It was readily apparent, even before the close of the war, that the Annapolis locatior would never again suffice. Activities of the School had not been curtailed during

the war years; they would not be so affected in the event of any future emergency. Some courses might be interrupted temporarily, but others would take their place and enrollment would have a tendency to increase rather than decrease. These realizations emphasized the fact that any new location for a permanent school should be one that would not be subject to claims of a higher priority under emergency conditions.

The selection for a new site for the Naval Postgraduate School was initiated in May 1945 with the appointment by the Secretary of the Navy of a special board to investigate available sites and make a recommendation for the relocation of the Postgraduate School. During the next four months, investigations were made in numerous localities on the East Coast, in the Mid-West, and on the West Coast. The stipulated requisites for the new location were:

(a) Adjacent to a large body of water to permit instruction and research in under-water methods of attack and defense and instruction in ship tactics.

(b) Within a reasonable distance of a deep anchorage to accommodate all types of ships for training and indoctrinational purposes.

(c) In close proximity to an airfield for necessary training and experimentati for naval aviator students and to afford ready means for aviators to maintain flying proficiency in an area where climatic conditions are favorable for year-round flyin

(d) Adjacent to a large body of water for combat intelligence and electronics instruction and to permit radar sweep of open waters for tracking ships and aircra

(e) Near a sizable town or city, but not one too large, to effect economy in t provision of markets, stores, schools, etc., for dependents of school personnel a to permit active participation in the community life.

This Board, known as the Spanagel Board, recommended that the School be located near Monterey, California and that the Del Monte Hotel property and additi land be purchased for this purpose.

When this matter was presented to Congress in 1946, a Congressional Comm also visited numerous sites including Monterey, California; Coos Bay, Oregon; As and Tongue Point, Oregon; Puget Sound, Washington, including Sand Point, Whidbe Island, and Bremerton; Portland, Oregon; Los Angeles, California; San Diego, Ca fornia; Balboa-Newport Harbors; Santa Ana, California. They concurred in the re mendation of the Spanagel Board that the School be established at Monterey, Califo

Extensive hearings were held in the Congress and, as a result of these hearings, on 31 July 1947, Public Law 302 was enacted by the 80th Congress. This Bill authorized the purchase of the Del Monte Hotel and various other existing buildings together with certain lands at Monterey, California. Funds in the amount of $2,500,000 were appropriated for the purchase and for conversion of existing buildings, as necessary, to allow for their early utilization to accommodate a General Line School of some 500 officers, prior to full conversion and transfer of the entire Postgraduate School.

Further legislation by the same Congress (Public Law 303) authorized the establishment of the U. S. Naval Postgraduate School. Following this legislation, the Secretary of the Navy redesignated the Postgraduate School, U. S. Naval Academy, Annapolis, Maryland, as the U. S. Naval Postgraduate School, Annapo Maryland, and specified that the title of the commanding officer of the school sho become "Superintendent", these changes to be effective 1 August 1947.

In the meantime certain other legislative developments indicated the increa importance and stature of the School. Public Law 250, 79th Congress, dated Dec ember 7, 1945 authorized the head of the Postgraduate School to confer masters doctors degrees in engineering and related fields. Included in Public Law 303 of 80th Congress was authorization for the granting of a Bachelor of Science degree engineering and other scientific fields. Regulations governing the awarding of al degrees, revised as necessary from time to time, have been approved by the Secretary of the Navy. Public Law 402, 79th Congress, dated June 10, 1946, established the civilian position of Academic Dean of the Postgraduate School.

The reestablishment of the General Line School was not postponed until th facilities at Monterey were available. At the close of World War II the Navy wa faced with obligations to the thousands of Reserve officers who had transferred the Regular Navy. These officers required additional instruction in general lin matters of seamanship, gunnery, naval engineering, administration and comma which would allow them to compete on a more nearly equal basis with their contemporaries who were graduates of the Naval Academy. It was estimated that some 10,000 officer transferees would require this course. When all other jun line officers, Naval Academy and NROTC graduates, were added, the need for overall capacity in a General Line School was judged to be above 1200. As an interim measure, the General Line School was established at Newport, Rhode Island as a subordinate activity of the Postgraduate School. Classes were star on 1 July 1946. The capacity of the School was 600. The Monterey site, as co verted with the original appropriation was to provide space for an additional 50 General Line students. The General Line School at Monterey was established late 1947 and convened its first class in February 1948. It was anticipated tha the tremendous backlog of transferred officers would have completed their bas general line education by 1954 and that, at that time, the School would be retu to its original purpose as outlined by the 1919 Board.

Experience during World War II had generated recognition of another important need, that is for a school for the training of naval intelligence officers. To fulfill this need the U. S. Naval School (Naval Intelligence) was established at Anacostia, D. C. with a starting date of 1 July 1946. This School also was to be a subordinate activity of the Postgraduate School. Original plans called for relocation of the Naval Intelligence School to Monterey when feasible, but as of 1959, such a move is no longer contemplated.

Activation of the subordinate activities at Newport and Anacostia allowed the facilities at Annapolis to be used exclusively for the advanced technical and engineering courses. Even so, conditions remained crowded. Some alleviation resulted from the transfer of the Aerology students to Monterey in July 1948, but the situation continued to grow worse. In September 1951, the Superintendent made strong representation before Congress for the Naval Postgraduate School items in the Military Public Works Appropriations Bill (FY 1952). He stated: "We most urgently need about a 40 percent increase of space now. It is vital to the successful accomplishment of a very important mission - the education of people competent to utilize the things being produced by science-research and development - on which we are spending billions of dollars. A penurious attitude toward the advanced education necessary to insure competent utilization of the things being produced by science in this day, is altogether incompatible with the recognition that is being given to the importance of research and advancement in the applications thereof - as manifested by relatively unlimited, or at least generous, appropriation. Our advanced (postgraduate) educational programs hav to do with the utilization of the products of this enormous effort. To modernize the one and leave the other to fend as best it can with the facilities of a past generation just doesn't make sense."

He continued: "Administrative space, classroom space, instructor office space, all are badly over-crowded. Laboratory space is so inadequate that desp maximum possible utilization of existing space, much of the School's equipment has to remain in storage. An eminent committee of the American Council on Education in 1947 recommended immediate acquisition of 40% additional space; i the succeeding four years the situation has become worse. The new facilities at Monterey are required to meet this very urgent need."

A plan had already been made for an interim establishment of the Postgraduate School at Monterey, using one wing of the Del Monte Hotel for classro instructor offices, and some laboratories; this space was to be supplemented by Butler Huts, each 40' x 160', for the accommodation of other laboratories. By means the School would realize the 40% expansion which had long since been cal for. The plan also provided for the vacating of the Annapolis site at the close c

the second term, and the opening of the third term at Monterey. The school year of 1951 had been started early, that is in July, in order to make the move possible that very year. By this plan, it was estimated the School would acquire "accommodations of minimum adequacy" 18 months in advance of the date that would be possible if the move were postponed until permanent buildings were completed. This plan would have the additional advantage of having staff and faculty on the site for monitoring and supervising the construction of the permanent facilities.

The Naval Postgraduate School projects survived the drastic scrutiny to which they were subjected (Fiscal Year 1952 Public Works Authorization and Appropriation Bills; over-all authorization reduced to about 1/3 of amount sought, and appropriations to 80% of amount authorized). Congressional action finally completed on October 20, 1951 authorized and provided funds not only for the interim establishment at Monterey but also for the first increment of a permanent establishment there for the Engineering School. "Engineering School" was the nam which was to be given to the technical courses conducted at Annapolis after their consolidation with the General Line School already at Monterey.

At this point the advanced planning of the Navy paid real dividends. Awardi of contracts for the interim establishment took place four days after the completior of Congressional action and on 25 October 1951 ground was broken for the interim construction projects. The School's first two terms of the 1951-52 year were com pleted on 21 November, a closing ceremony terminating operations at Annapolis was held and the move to Monterey was begun. The directive from the Secretary of the Navy relocating the Postgraduate School was dated 5 December 1951 effectiv as of 22 December 1951. This same directive established the U. S. Naval Administrative Command, whose mission was "to provide logistic support, including public works, medical, dental and supply functions for the Naval Postgraduate School and its components." It disestablished the U. S. Naval School, General Lir Monterey, California, and assigned the facilities and functions of this school to the U. S. Naval Postgraduate School. As of 22 December the Superintendent assumed his duties as Superintendent of the Naval Postgraduate School with additional duty as Director, Engineering School, U. S. Naval Postgraduate School. This addition duty was to be continued through the transition and consolidation periods. The off allowance for the U. S. Naval Postgraduate School, Monterey, California at the ti of the School's establishment there was 88.

1952 - Present

On 16 February 1952 the formal opening ceremony for the newly located sc was held with the Secretary of the Navy and many distinguished officers and civili guests in attendance. Classes in the Engineering School were resumed on 18 Feb

The first increment of the new building program; i.e., the portion for which ground was broken in June 1952 included: (1) Main Engineering Building, a five-story structure with about 200,000 square feet of floor space, which was planned to house the Departments of Electronics and Physics, Chemistry and Metallurgy, and most of Aerology; (2) Electrical Engineering Building, a two-story structure with about 35,000 square feet of floor space; (3) a portion of an ultimate 57,000 square foot two-story building to house the Department of Mathematics, classrooms and drafting rooms, and some Engineering School departmental offices; and (4) a portion of a new heating plant as required to support the first building increment. A second increment was to provide: (1) a three-story, 76,000 square foot structure for the laboratories of the Aeronautical Engineering and Mechanical Engineering Departments; (2) a 1200-seat capacity Lecture Hall; and (3) completion of the 57,000 square foot building and the heating plant begun with the first increment. The planning of the time called for 3rd and 4th increments, the third increment to provide: (1) a 60-bed infirmary; (2) a 200-man barracks and mess hall for the enlisted allowance of the School; (3) permanent buildings for the General Line School; (4) Library (including collateral equipment); and the 4th increment to provid (1) permanent Steam Engineering Laboratory and Nuclear Reactor Building; (2) permanent Ordnance and Gunnery Laboratory Building; (3) Aerothermodynamic and Aircraft Propulsion Laboratory Building; (4) Subsonic Aerodynamics Laborato Building; (5) 500-seat Chapel; (6) Gymnasium and athletic field; (7) 300-seat audito ium.

The buildings provided for in increments one and two became reality. The dedication of the five new buildings took place on 31 May 1956. With one exception they were named in honor of naval officers who had been closely associated with the development of the Navy's educational program and/or with the Naval Postgraduate School. One building was named in honor of a civilian professor who was associate the the School from 1913 until 1946.

The changes and construction provided for in the original increments three and four have not materialized. Each passing year limitations of military co struction funds have pushed these plans farther into the future.

In 1955 the General Line School shorter program, established after Wo War II, was terminated, and a return was made to a program more nearly parallel in principle the original plan recommended for such a school in 1919. This revise program of 9 1/2 months duration was planned for officers who had already earned their baccalaureate degree and had had five to seven years of service in the Navy.

June 1956 saw the addition of a new school as a component of the Naval Postgraduate School. This new Management School was to provide "an educational program for officers in the application of sound scientific management practice to the complex organizational structure and operations of the Navy with a view toward increasing efficiency and economy of operation." Officers of the Supply and Civil Engineering Corps made up the first class and emphasis was placed on theory of general management, financial management and inventory management. In August 1957, the Management School was expanded to include Line officers as well. Two classes per year of five months' duration each have been held since 1957 and the curriculum includes various areas of industrial management as well as additional material in the basic areas.

During 1957 discussions were begun on establishing a bachelor of science program within the General Line School. The concept was that this curriculum would fit into the Navy's five-term college program with the ultimate aim of carrying out the entire five-term program at Monterey. Initial input was scheduled for August of 1958. There would be two inputs annually, primarily made up of pilots. The curriculum was planned to include some subjects taught in the General Line curriculum with sufficient new courses to justify the granting of a bachelor of science degree, no major designated. The discussions resulted in the initiation of this program on schedule in August 1958 after an official redesignation of the school as the General Line and Naval Science School, to become effective as of 1 July 1958. Initial input into this program was 42.